

Response to Office Action
Serial No. 10/766,976

~~tessellating said depth map into a number of patches;~~
~~fitting a plane to each patch of a plurality of patches;~~
~~obtaining a normal vector to each plane; and~~
~~classifying each of said plurality of patches, based on said normal vector for that patch, as likely to represent a potential threat, as possibly representing a potential threat, or as being unlikely to represent a potential threat.~~

25. (Original) The computer readable medium of claim 24 that further controls a computer to group patches together that are likely to represent said potential threat.

26. (Original) The computer readable medium of claim 25 that further causes the processor to create a bounding box that represents the potential threat, wherein the bounding box is created in accord with the patch groupings.

27. (Currently amended) The computer readable medium of claim 20 that further causes the processor to detect a potential threat in said tessellated depth map by the steps of moving each patch after local tessellation to find the region of maximum stereo density near the original patch location, discarding said patch if the region of maximum stereo density does not meet a predetermined criteriaon, and adding said patch to said plurality of patches if said patch density meets said predetermined criteriaon.

28. (Original) The computer readable medium of claim 20 that further causes the processor to obtain normal vectors by the steps of calculating for each patch a third Eigen-vector of a matrix of patch values using a singular valued decomposition of said matrix, and then estimating said normal vector as said third Eigen-vector.

REMARKS

In view of the above amendments and the following discussion, the Applicants submit that none of the claims now pending in the application is anticipated or made

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obvious under the provisions of 35 U.S.C. § 102 and 35 U.S.C. § 103. Thus, the Applicants believe that all of these claims are now in allowable form.

I. REJECTION OF CLAIMS UNDER 35 U.S.C. § 102

The Examiner has rejected claims 1-4, 8-10, 13, 14, 16, and 20-23 in the Office Action under U.S.C. § 102(b) as being anticipated by Franke et al., Autonomous Driving Goes Downtown, IEEE Intelligent Systems, 1998 (Franke).

Though, in the Office Action Summary, claim 23 has been listed as rejected, there is no discussion of the basis of rejection in the pages 2-4 of the Office Action. Applicants assume that the claim 23 has been rejected for similar reasons as claims 20-22 as described on page 4 of the Office Action.

The Examiner indicated that the subject matter of claim 8 was allowable. The Applicants have amended independent claims 1, 13, and 20 to include a portion of the subject matter of claim 8; namely, the depth map is tessellated into a number of patches to facilitate potential threat detection. The creation and use of a tessellated depth map is not taught by Franke.

Since Franke is devoid of any teachings regarding depth map tessellation, the Applicants believe independent claims 1, 13, and 20 are patentable under 35 U.S.C. § 102 (b). Claims 2-12, 14-19, and 21-28 depend, either directly or indirectly, from claims 1, 13, and 20 and are patentable at least for the same reasons that the independent claims are patentable. As such, the Applicants respectfully request the rejection of claims 1-4, 8-10, 13-14, 16, 20-23 be withdrawn.

II. REJECTION OF CLAIMS UNDER 35 U.S.C. § 103

A. Claims 6 and 15

The Examiner has rejected claims 6 and 15 as being unpatentable over Franke in view of Yang et al., Vision Based Real-time Obstacles Detection and Tracking for Autonomous Vehicle Guidance. Real-time Imaging VI, Proceedings of SPIE, Vol. 4666, pp. 65-74, 2002 (Yang).

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Claims 6 and 15 depend from independent claims 1 and 13 that have been amended to include subject matter not taught by either Franke, Yang, or any combination thereof. Specifically, neither Franke nor Yang teaches tessellating a depth map into a number of patches. Consequently, claims 1 and 13, from which claims 6 and 15 depend, are patentable over these references. Claims 6 and 15, in view of their dependence on claim 1 and 13, are also patentable. As such, the Applicants respectfully request the rejection of claims 6 and 15 to be withdrawn.

III. ALLOWED CLAIMS

The Applicants thank the Examiner for allowing claims 8-12, 17-19, and 24-28 subject to rewriting and proper dependence. The Applicants have amended claims 1, 13, and 20 to include allowable subject matter from claims 8, 17, and 24.

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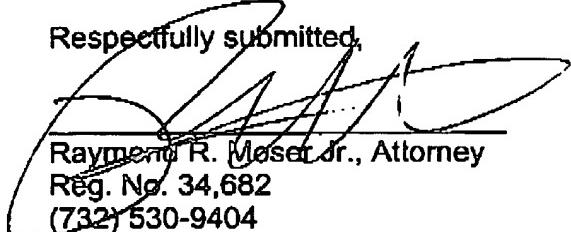
CONCLUSION

Thus, the Applicants submit that all of the above claims fully satisfy the requirements of 35 U.S.C. §102 and 35 U.S.C. §103. Consequently, the Applicants believe that all these claims are presently in condition for allowance. Accordingly, both reconsideration of this application and its swift passage to issue are earnestly requested.

If, however, the Examiner believes that there are any unresolved issues requiring the issuance of a final action in any of the claims now pending in the application, it is requested that the Examiner telephone Mr. Raymond Moser, Esq. at (732) 530-9404 so that appropriate arrangements can be made for resolving such issues as expeditiously as possible.

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Respectfully submitted,


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